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SOURCE Documentary as indicated. (Information specifically requested.)

RECENTLY PUBLISHED RESEARCH OF THE KAZAN MEDICAL INSTITUTE IMENI V. M. MOLOTOV, USSR

"Varying Intensity in the Activity of the Hypophysis in Thyroidectomized Guinea Pigs and Rats due to the Effect of Thiouracil," N. Arkhangel'skaya, A. A. Voytkevich, Chair of Gen Biol, Kazan Med Inst, 12 pp

"Izv Ak Nauk, Ser Biol" No 2, Feb 1947

Study of the changes in the thyrotropic function of the glandular lobe due to hypophysis in animals subjected to thiouracil before and after thyroidectomy. (16T37)

"Changes in the Thyrotropic Function of the Hypophysis due to the Combined Effect of Thiouracil and the Thyroid Hormone," A. A. Voytkevich, Kazan Med Inst, 9 pp

"Izv Ak Nauk, Ser Biol" No 2, Feb 1947

Experiments on white rats, showing that the action of thiouracil brought forth the phenomenon of hypertrophy and hyperplasia of the thyroid gland and served to prove that it rapidly reduced the content of the hormonal element in the thyroid tissue to zero. (16T36)

"Cipozin, A New Respiratory Stimulant," M. A. Aluf, T. V. Raspopova, Kazan Med Inst

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"Farmakol i Toksikol" Vol 8, No 1, 1945, pp 26-8

Ciperin is Et 2-methyl-8-(1-methyl-2-pyrrolidyl)imidazo /1,2-a/ pyridine-3-carboxylate.2HCl. It stimulates respiration in cats, rabbits, and dogs after intravenous or intramuscular injection. The effect is intensified by morphine or $CCl_3CHO.H_2O$. Rabbits were the most sensitive test animals. Effects of peracetin and ciperin are compared.

"Intensity of Brain-tissue Respiration: The Brain and the Muscle Supply of Oxygen, Carbohydrates, and Products of Decomposition of Carbohydrates during Insulin Intoxication," M. G. Mereshinskiy, L. S. Cherkasova, Kazan Med Inst

"Byull Eksper Biol i Med" Vol 22, No 1, 1946, pp 31-4

Guinea pigs, rabbits, and dogs were investigated as to brain-tissue respiration in insulin shock by using the Warburg technique on minced tissue in Ringer-bicarbonate suspension. In guinea pigs the brain tissue shows a Q_{O_2} in insulin shock which is 54% of normal value. In rabbits the white brain substance gave 67%, gray matter 52.2%. In dogs the white matter gave 76.1%, gray matter 63.2%. Thus, insulin shock leads to severe depression of brain respiration. Analysis of arterial and venous blood showed that the supply of glucose to the muscle is depressed, although the O supply is substantially normal. As the shock developed, the muscle lost its ability to retain glucose, and the venous blood carried as much as 44% of normal glucose level; the O in venous blood in this case was 143% of normal. The brain tissue tends to retain glucose in early shock stage but later begins to lose glucose like the muscle. The venous blood from the brain showed severe increase over normal. In early shock stages glycogen tends to be retained in the muscle and especially in the brain; in deep shock this tendency is substantially lost. Blood lactic acid rises in early shock, probably because of convulsions; this condition moderates when coma stage is reached. Brain tissue does not utilize lactic acid but actually supplies it to the blood. Pyruvic acid level does not vary significantly.

"Pharmacology of Polygonum Aviculare," M. A. Aluf, T. V. Raspopova, Kazan Med Inst

"Farmakol i Toksikol" Vol 8, No 1, 1945, pp 34-5

Tests with 10 and 20% infusions, decoction (1:4), aqueous extract (1:50), and alcohol extract of knot-grass leaves were made on mice, cats, rabbits, and dogs. The MLD for cats and rabbits is 20 cc/kg as infusion or decoction, or 2 cc/kg as aqueous extract, given intravenously. For mice it is 0.2 cc (about 10 cc/kg) of aqueous extract, given intraperitoneally.

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Intravenous injections lower blood pressure in cats, rabbits, and dogs. The most potent preparations are the aqueous and alcohol extracts. Further research as hemostatic agents is suggested.

"Comparative Evaluation of Albamine and Sulfanilamide," M. A. Aluf, B. A. Bol'ter, T. V. Raspopova, Kazan Med Inst

"Farmakol i Toksikol" Vol 8, No 1, 1945, pp 35-6

Albamine, $H_2NC_6H_4SO_2NHAc$ (I), is somewhat more alkali-soluble than sulfanilamide (II). Toxicity tests on 10 white mice with 5% solutions in aqueous alkali and 10% solutions in 40% urotropine showed the maximum toxic doses to be 10 mg; MLD_{100} 35 mg. With 15-20-mg doses, II was lethal to 40-50% of the test mice, I only to 20%. At 25 mg, II was 70% lethal, I 60%; at 30 mg, II 80%, I 90%. Blood pressure of cats under urethan narcosis was measured after injecting 100, 200, and 300 mg/kg intravenously, as 1 or 2% solution in aqueous alkali or as 10% solution in 40% urotropine. At 200 and 300 mg/kg, I tended to lower blood pressure, II to raise it. Neither had any effect at 100 mg/kg. Clinical trials with 10 patients showed that I is fully equal in potency to II or prontosil, and has no side reactions.

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